

A Method to Measure the Activation State of Signaling Pathways in Cells

Abstract of the Disclosure

5 The activity of multiple proteins in a single living cell, portion of a cell or in a
group of cells is simultaneously measured by introducing reporter molecules.
The reporter(s) is chemically modified by the enzyme of interest. In some cases
the enzyme(s) is affected by the addition of a stimulus or a pharmaceutical
10 diminished or terminated, and the reporter and modified reporter are removed.
The activity of the enzyme(s) is determined by measuring the amount of reporter
remaining, the amount of altered reporter produced, or by comparing the amount
of reporter to the amount of altered reporter. A database is compiled of the
activities of the different proteins. By performing a series of experiments at
15 different time points, conditions, and varieties of cell types, a database is
developed for molecular cellular mechanisms in health and disease states. By
exposing cells to a variety of compounds data for drug development and
screening is provided.

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